

## ABSTRACT

The present invention relates to the cloned genes which code for uncoupling proteins controlling thermogenesis in human skeletal muscle and heart. A further aspect of the present invention relates to the use of the said genes for correcting dysfunctions of thermogenesis in human skeletal muscle and heart.

The present invention makes it possible to exploit novel therapeutic (or preventive) methods for disorders such as obesity or cachexia. As a result of the identification and isolation of the genes coding for UCP3<sub>L</sub> and UCP3<sub>S</sub>, it is, in effect, possible to develop medicaments which act on the basis of a correction, by gene therapy or by antisense oligonucleotides relating to the sequence of the gene in question or to one of its fragments, of a lack or an excess of UCP3.